

**Amendments to the Specification:**

Please replace the abstract with the following amended abstract:

An image processing unit (~~100,200,300~~) for computing a sequence of output images on basis of a sequence of input images, comprises: a motion estimation unit (~~102~~) for computing a motion vector field on basis of the input images; a quality measurement unit (~~104~~) for computing a value of a quality measure for the motion vector field; an interpolation unit (~~106~~) for computing the output images by means of interpolation of pixel values of the input images, on basis of the motion vector field; and control means (~~108~~) to control the interpolation unit (~~106~~) on basis of the quality measure. The quality measurement unit (~~104~~) is arranged to compute the value of the quality measure on basis of a maximum difference between neighboring motion vectors. If the value of the quality measure is lower than a predetermined threshold, then a motion compensated interpolation is performed, else a non-motion compensated interpolation is performed.